Models 1930-C and 2930-C

Single and Dual-Channel Optical Power Meters

- High-Sensitivity
- Extensive (131 dB) Power Range (With Attenuator)
- Wide Selection of Detectors (190nm to 1800nm)
- USB, GPIB and RS-232 Interfaces
- Rack Mountable in Single or Dual Set Configurations

The **1930-C Single-Channel and 2930-C Dual-Channel Optical Power Meters** deliver affordable high-performance for Scientific R&D and Telecom/Datacom laser power measurement applications.

Used as a bench-top test station or integrated into an automated measurement system, the 1930-C/2930-C power meters work in conjunction with Newport's free-space detectors to provide flexibility for all laser power measurements.

Easy-to-install detector adaptors accept industry-standard fiber optic connectors, yielding high-accuracy power measurements. Additionally, low-noise detectors and seven gain ranges enable continuous power measurements in the range of tens-of *femto*-W to 2.5 W.

The 1930-C/2930-C power meters are compatible with all Newport 918/818 free-space Germanium (Ge), Silicon (SI) and Indium Gallium Arsenide (InGaAs) detectors to cover a spectral range from 190nm to 1800nm and satisfy most optical power measurement requirements. The front panel enables easy connection of Newport detectors and supports amplified detector analog output to an oscilloscope or voltmeter for up to 100kHz.

Measurements can be displayed in W, A, dBm, dB or relative units, either directly or as relative ratio measurements from present or stored values. Statistical capabilities include the computation of Min, Max, Max-Min, Mean and Standard Deviation. Additional features such as digital and analog filtering, and data storage of up to 1,000 readings per channel are also offered.

Newport's experience with calibration, together with N.I.S.T. calibration traceability and high precision optical power meters provide users with accurate measurements and exceptional inter-instrument correlation. In R&D, QA/QC, and manufacturing environments, the 1930-C/2930-C power meters enable users to benefit from high correlation between multiple locations at a price-to-performance ratio second to none.

Call Newport's Application Sales Engineers to help you select the optical detector that best meets your application requirements.

For more details on Newport's low-power detectors and fiber optic attachments compatible with the 1930-C and 2930-C, please see page 1177 thru 1183.

Instrument Specifications

Power Input Range	-97 to +34.0 dBm (InGaAs Detector)
Sampling Resolution	250,000 counts, 4 kHz
DC Accuracy (Power Meter without Detector)	<±0.4% typical
Linearity (%)	±0.5
Signal Ranges	Up to 7 decades (dependent on detector type)
Display Type	Graphical High-Contrast 240 X 128 LCD
(ms)Display Update Rate	100
Auto-Ranging Time	15 ms (typical)
GPIB Bus Transfer Time	10 ms (typical)
Analog Output	BNC, 0–5V into 1 MΩ, 0–2.5V into 50Ω
Connectors	
Detector Input	14 pin Sub-mini DIN
Analog Output	BNC, 0–5V into 1 MΩ, 0–2.5V into 50Ω
USB	USB-Standard, Male
RS-232	9 pin D-sub
GPIB	24-pin IEEE-488
Power Requirements	90–132/198–250 VAC, 50/60 Hz
Absolute Maximum Line Current Rating (mA)	300
Dimensions [in. (mm)] (L x W x H)	13.6 (345) x 8.8 (224) x 5.3 (135)
Weight [lb (kg)]	8 (3)
Enclosure	Metal case, painted
Operating Temperature	10°C to +45°C; <85% RH noncondensing
Storage Temperature	-20°C to +60°C; <90% RH noncondensing

918/818 Detector System Specifications

The 1930-C/2930-C is compatible with Newport's Ge, Si and InGaAs detectors, allowing both free-space and fiber pigtailed measurements in the 190–1800 nm range.
When using Model 818 Low-Power detectors, use adaptor P/N 818-ADAPT-OPM.

Detector Model	918-UV	918-SL	918-IR	918-IG
Detector Material	Silicon	Silicon	Germanium	Indium Gallium Arsenide
Active Diameter (cm)	1.13	1.13	0.3	0.3
Wavelength (nm)	190–1100	400–1100	780–1800	800–1650
Power Range [W (dBm) per cm^2]	1 pW to 2.5 W (-90 to +34.0)	3 pW to 2 W (-85 to +33.0)	100 nW to 2.5 W (-70 to +34.0)	200 fW to 2.5 W -(97 to +34.0)
Accuracy (w/o attenuator)(1) (%)	±2	±2	±3	±2
Linearity (%)	0.5	0.5	±0.5	±0.5
NEP @ 5 Hz and 1 A/W	20 fW/√Hz	20 fW/√Hz	9 pW/√Hz	20 fW/√Hz

1) At calibration temperature maintained to ± 0.2°C, -20 dBm level having 99% encircled energy on detector with no optical attenuator

Ordering Information

Model	Description
1930-C	Single-Channel Optical Power Meter
2930-C	Dual-Channel Optical Power Meter
818-ADAPT-OPM	8-pin mini DIN to 14-pin circular connector adaptor cable
PM1-RACK	Rack Mount Kit, Single
PM2-RACK	Rack Mount Kit, Dual